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09/560,373	04/28/2000	Gregory Lucius Meredith	MS147248.1	3570

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AMIN & TUROCY, LLP  
24TH FLOOR, NATIONAL CITY CENTER  
1900 EAST NINTH STREET  
CLEVELAND, OH 44114

EXAMINER

KISS, ERIC B

ART UNIT PAPER NUMBER

2192

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/560,373	<b>Applicant(s)</b> MEREDITH ET AL.	
	<b>Examiner</b> Eric B. Kiss	<b>Art Unit</b> 2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 28-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 and 28-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

TC

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 15 February 2005 has been entered. Claims 1-22 and 28-33 are pending.

### ***Admitted Prior Art***

2. If Applicant does not seasonably traverse the well-known statement during examination, then the object of the well known statement is taken to be admitted prior art. In re Chevenard, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, Applicant is charged with rebutting the well-known statement in the next reply after the Office action in which the well-known statement was made. This is necessary because the Examiner must be given the opportunity to provide evidence in the next Office action or explain why no evidence is required. If the Examiner adds a reference to the rejection in the next action after applicant's rebuttal, the newly cited reference, if it is added merely as evidence of the prior well known statement, does not result in a new issue and thus the action can potentially be made final.

The object of the following statement is taken to be admitted prior art:

It was well known and commonly practiced in the computer art at the time the invention was made to incorporate a computer readable medium into a computer system in order to allow data transfer between the medium and the system, such as, for example, for the execution of a program embodied in a CD-ROM medium on such a

Art Unit: 2192

computer system (see the unchallenged statement of Official Notice taken in the rejection of claim 21 in the previous Office action, mailed 15 June 2004).

### *Claim Objections*

3. The numbering of claims is not in accordance with 37 CFR 1.126 which new claims to be numbered consecutively.

Misnumbered claim 30 (second occurrence) been renumbered as claim 31.

### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-22 and 28-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claims 1, 7, and 28 each recite limitations involving “a SLANG programming language”. Such a programming language is not defined by the specification in a concrete manner necessary to define an ascertainable scope for the claims. It is noted that in each instance throughout the specification, SLANG, as a programming language, is only defined by example (see, for example, p. 20, lines 8-9, “Fig. 6 illustrates an example of the SLANG programming language syntax...”). While the Extended Backus-Naur Form illustrated in Fig. 6 may be capable of formally defining such a SLANG programming language (a Backus-Naur form is a well known metalanguage tool for formally defining the syntax of a language), the specification falls short of

limiting it to such, and accordingly, the metes and bounds of “a SLANG programming language” are not properly defined.

Claims 2-6, 8-22, and 29-33 are rejected based on their dependence from claims 1 and 7, as set forth above.

In the interest of compact prosecution, “a SLANG programming language” is subsequently interpreted as a scheduling programming language written in XML (as suggested on p. 18 of the instant specification) for the purpose of further examination.

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-14, 21, 22, and 28 are rejected under 35 U.S.C. 103(a) as obvious over Release 8.0 of the Workflow Template software product publicly available from Template Software, Inc. in 1998 as evidenced by “Using the WFT Development Environment”, 1998 (hereinafter Template) in view of U.S. Patent No. 6,393,456 to Ambler et al.

As per claim 1, Template discloses reducing a business process using a programming language (workflow design; see “Introduction” on page 3-2, and in particular, the first paragraph of that section);

dividing the reduced business process into at least one independent transaction and at least one parent interdependent transaction, the at least one parent interdependent transaction

Art Unit: 2192

comprising two or more child interdependent transactions (see “Creating copy flows” on page 3-20 for distinguishing between concurrent autonomous (using separate flows) business operations and concurrent interdependent (using a single flow) business operations (the copy flow allows operations using the same flow to be represented independently; see, for example, Fig. 3-3 on page 3-12 in which the copy flow junction box supplies the same “REQUISITION” flow to both the “Approve Requisition” and “Check Inventory” tasks; see also, “Creating compound flows” on page 3-19 for grouping business operations into concurrent interdependent transactions (forms a work item set associated with the compound flow);

executing the at least one independent transaction independently from the at least one parent interdependent transaction to increase throughput and decrease latency of the business process, the at least one independent transaction committing when the last child interdependent transaction commits (forming a concatenation of the two or more input work items, as a result of an *And* junction condition; see, for example, “Creating compound flows” on page 3-19); and

transferring committed data associated with the at least one independent transaction and the at least one parent interdependent transaction to a computer component for further processing (see, for example, “Creating compound flows” on page 3-19).

Template does not explicitly disclose the programming language having an XML syntax. However, Ambler teaches that workflow specifications may be written in such a programmable language having an XML syntax (see column 8, lines 42-46 and column 12, lines 49-59). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to modify the Template product to include a programmable

Art Unit: 2192

language having an XML syntax as once taught by Ambler. One would be motivated to do so to provide a robust tool for specifying workflows.

As per claims 2-3, Template further discloses the children interdependent transactions respectively including one or more actions, the one or more actions being concurrently executed independently from each other, the respective children independent transactions committing when all of their associated actions are completed (see, for example, Table 3-1 on page 3-3 and second paragraph of “About the Task Editor perspective on tasks” on page 6-2; and “Creating compound flows” on page 3-19).

As per claim 4, Template further discloses explicitly defining transaction boundaries for the at least one independent transaction and the children interdependent transactions as a function of a number of actions within the at least one independent transaction and the children interdependent transactions, respectively, in order to define a granularity at an action level (a flow defines a possible route between tasks through which a work item can travel; see Table 3-1 on page 3-3).

As per claim 5, Template further discloses the children interdependent transactions being concurrently executed in isolation from each other (see, for example, Table 3-1 on page 3-3 and “Creating copy flows” on page 3-20).

As per claim 6, Template further discloses employing separate machines to execute the at least one independent transaction and the at least one parent interdependent transaction (see, for example, Table 3-1 on page 3-3 and “Creating copy flows” on page 3-20).

As per claim 7, Template discloses a user interface component (Workflow Design Editor) and a plurality of model components (tasks, flows, work items, roles, junctions, and labels) accessible through the user interface component and adapted to allow a user to create a model of a business process (workflow design; see “Introduction” on page 3-2, and in particular, the first paragraph of that section), the plurality of model components comprising a distinguishing model component (copy flow junction box; see “Creating copy flows” on page 3-20) for distinguishing between concurrent autonomous (using separate flows) business operations and concurrent interdependent (using a single flow) business operations (the copy flow allows operations using the same flow to be represented independently; see Fig. 3-3 on page 3-12 in which the copy flow junction box supplies the same “REQUISITION” flow to both the “Approve Requisition” and “Check Inventory” tasks). Template does not explicitly disclose the software comprising a programmable language having an XML syntax. However, Ambler teaches that workflow specifications may be written in such a programmable language having an XML syntax (see column 8, lines 42-46 and column 12, lines 49-59). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to modify the Template product to include a programmable language having an XML syntax as once taught by Ambler. One would be motivated to do so to provide a robust tool for specifying workflows.

As per claim 8, Template further discloses a transaction grouping model component (compound flow junction box) for grouping business operations into concurrent interdependent transactions (forms a work item set associated with the compound flow; see “Creating compound flows” on page 3-19).



As per claim 9, Template further discloses the grouping model component (compound flow junction box) providing synchronization of concurrent interdependent transactions based on the completion of the concurrent interdependent transactions (forming a concatenation of the two or more input work items, as a result of an *And* junction condition; see “Creating compound flows” on page 3-19).

As per claims 10 and 11, Template further discloses associating actions (tasks) with transactions (work items; see Table 3-1 on page 3-3 and second paragraph of “About the Task Editor perspective on tasks” on page 6-2). Therefore, the transaction grouping model component disclosed by Template also functions as an action grouping model as claimed.

As per claim 12, Template further discloses the plurality of model components comprising at least one boundary establishing component (flows) for defining transaction (work item) boundaries (a flow defines a possible route between tasks through which a work item can travel; see Table 3-1 on page 3-3).

As per claim 13, Template further discloses a component for establishing concurrent operations (copy flow; see Table 3-1 on page 3-3 and “Creating copy flows” on page 3-20).

As per claim 14, Template further discloses a component for establishing sequential operations (plain flow; see Table 3-1 on page 3-3).

As per claim 21, as admitted prior art, it was well known and commonly practiced in the computer art at the time the invention was made to incorporate a computer readable medium into a computer system in order to allow data transfer between the medium and the system, such as, for example, for the execution of a program embodied in a CD-ROM medium on such a computer system. Therefore, it would have been obvious to one having ordinary skill in the

Art Unit: 2192

computer art at the time the invention was made to have a computer readable medium residing on a computer system as part of a system incorporating the Template product.

As per claim 22, Template further discloses the plurality of model components comprising a component (compound flow junction box) for defining concurrent synchronizing constraints as occurring upon the completion of the autonomous operations (forming a concatenation of the two or more input work items, as a result of an *And* junction condition; see “Creating compound flows” on page 3-19).

As per claim 28, Template discloses means for: distinguishing between synchronization of autonomous concurrent operations (using separate flows) and interdependent concurrent operations (using a single flow; the copy flow allows operations using the same flow to be represented independently; see Fig. 3-3 on page 3-12 in which the copy flow junction box supplies the same “REQUISITION” flow to both the “Approve Requisition” and “Check Inventory” tasks); expressing synchronization constraints on completion of autonomous concurrent operations (forming a concatenation of the two or more input work items, as a result of an *And* junction condition; see “Creating compound flows” on page 3-19); and associating transaction operations and groups of business operations (creating a workflow design that represents the flow of work throughout your business; see “Introduction” on page 2-2). Template does not explicitly disclose the software comprising a programmable language having an XML syntax. However, Ambler teaches that workflow specifications may be written in such a programmable language having an XML syntax (see column 8, lines 42-46 and column 12, lines 49-59). Therefore, it would have been obvious to one having ordinary skill in the computer

art at the time the invention was made to modify the Template product to include a programmable language having an XML syntax as once taught by Ambler. One would be motivated to do so to provide a robust tool for specifying workflows.

8. Claims 15-20 and 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Template in view of Ambler et al., as applied to claims 1 and 12 above, and further in view of U.S. Patent No. 5,940,839 to Chen et al.

As per claim 15, Template discloses such a system for business process modeling including a user interface and a plurality of model components (see disclosure applied above to claim 12) but fails to teach a compensation model component adapted to compensate committed interdependent concurrent transactions and being invoked upon the occurrence of a failed interdependent concurrent transaction. However, Chen teaches, as part of a transaction processing method and system, such a compensation model component (transaction management system (TMS) mechanisms; see column 5, lines 10-48) adapted to compensate committed interdependent concurrent transactions and being invoked upon the occurrence of a failed interdependent concurrent transaction (see column 2, line 65 through column 3, line 33). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to modify the Template product to incorporate a compensation model component as once taught by Chen. One would be motivated to do so to provide the ability to handle transaction failures.

As per claim 16, Chen further teaches transactions being children in a parent transaction (as part of an “ancestor tree”; see column 3, lines 24-27) wherein a compensation routine is

Art Unit: 2192

invoked by the parent transaction (the failed transaction is undone by proceeding from the in-process closest recoverable ancestor (ICRA) transaction; see column 3, lines 11-33). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to further modify the Template product to include invocation of a compensation model component by a parent transaction as per the teachings of Chen. One would be motivated to do so allow recovery of a failed transaction by reverting back to a parent transaction.

As per claim 17, Chen further teaches calling compensation routines within the committed interdependent concurrent transactions (see column 9, lines 4-17). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to further modify the Template product to include compensation routines within committed interdependent transactions as per the teachings of Chen. One would be motivated to do so enable elimination of the effect of a transaction.

As per claims 18-20, Chen further teaches calling compensation routines within a failed transaction based on information on committed transactions stored within a database (see column 8, line 61 through column 9, line 5). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to further modify the Template product to include the compensation model component calling compensation routines within the failed interdependent concurrent transaction based on information on the committed interdependent concurrent transactions stored within a database as per the teachings of Chen. One would be motivated to do so allow for compensation of committed transactions beyond the failure affected scope.

As per claims 29 and 30, Template discloses such a method for business process modeling but fails to expressly disclose failing the at least one parent interdependent transaction when at least one of its children interdependent transactions does not commit, and compensating the at least one failed child transaction, the at least one parent interdependent transaction invoking a compensation routine within the at least one failed child transaction that compensates the at least one failed child transaction; failing the at least one parent interdependent transaction when at least one of its children interdependent transactions does not commit, and compensating the at least one failed child transaction, the at least one parent interdependent transaction invoking a compensation routine within the at least one failed child transaction that compensates the at least one failed child transaction. However, Chen teaches, as part of a transaction processing method and system, such a compensation model component (transaction management system (TMS) mechanisms; see, for example, column 5, lines 10-48) adapted to compensate committed interdependent concurrent transactions and being invoked upon the occurrence of a failed interdependent concurrent transaction (see, for example, column 2, line 65 through column 3, line 33). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to modify the Template product to incorporate a compensation model component as once taught by Chen. One would be motivated to do so to provide the ability to handle transaction failures. Chen further teaches calling compensation routines within a failed transaction based on information on committed transactions stored within a database (see, for example, column 8, line 61 through column 9, line 5). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to further modify the Template product to include the compensation model component

Art Unit: 2192

calling compensation routines within the failed interdependent concurrent transaction based on information on the committed interdependent concurrent transactions as per the teachings of Chen. One would be motivated to do so allow for compensation of committed transactions beyond the failure affected scope.

As per claim 31, Template discloses such a method for business process modeling but fails to expressly disclose compensating the at least one parent independent transaction when it does not commit and all of its children interdependent transactions commit. However, Chen teaches, as part of a transaction processing method and system, such a compensation model component (transaction management system (TMS) mechanisms; see, for example, column 5, lines 10-48) adapted to compensate a parent uncommitted independent transactions and being invoked upon the occurrence of a failed interdependent child transaction (see, for example, column 2, line 65 through column 3, line 33; and col. 8, line 60, through col. 9, line 26). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to modify the Template product to incorporate such a compensation model component as once taught by Chen. One would be motivated to do so to provide the ability to handle transaction failures and to allow for compensation of transactions.

As per claims 32 and 33, Template discloses such a method for business process modeling but fails to expressly disclose compensating the at least one parent interdependent transaction when it does not commit and all of its children interdependent transactions commit, the at least one parent interdependent transaction invoking its own compensation routine. However, Chen teaches, as part of a transaction processing method and system, such a compensation model component (transaction management system (TMS) mechanisms; see, for

Art Unit: 2192

example, column 5, lines 10-48) adapted to compensate a parent uncommitted interdependent transactions and being invoked upon the occurrence of a failed interdependent child transaction (see, for example, column 2, line 65 through column 3, line 33; and col. 8, line 60, through col. 9, line 26). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to modify the Template product to incorporate such a compensation model component as once taught by Chen. One would be motivated to do so to provide the ability to handle transaction failures and to allow for compensation of transactions.

### *Conclusion*

9. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric B. Kiss whose telephone number is (571) 272-3699. The Examiner can normally be reached on Tue. - Fri., 7:00 am - 4:30 pm. The Examiner can also be reached on alternate Mondays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Tuan Dam, can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

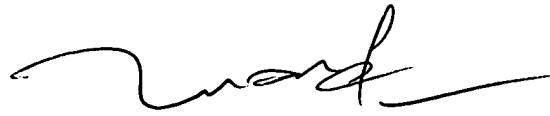
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Art Unit: 2192

Any inquiry of a general nature should be directed to the TC 2100 Group receptionist:

571-272-2100.

EBK / ~~EBK~~  
April 1, 2005



TUAN DAM  
SUPERVISORY PATENT EXAMINER